
Show your work. No work No credit

(2 pts)

1. Write a function involving x that does not have an inverse:

$$f(x) =$$

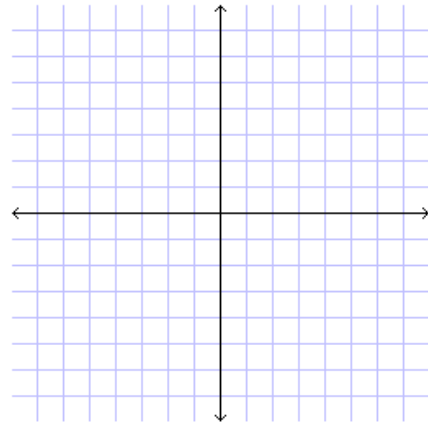
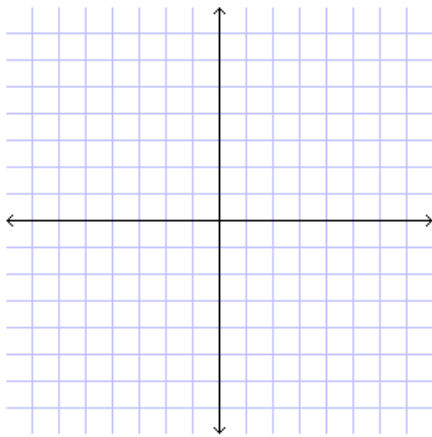
2. Find the inverse of the following one-to-one functions:

(3 pts) a. $f(x) = 4x - 1$ (6 pts) b. $g(x) = \frac{2x+1}{x-3}$

(4 pts each)

3. Graph the following functions, label the asymptote and two points:

a. $f(x) = 4^{x+2} - 3$ b. $g(x) = -3 \log(x - 2)$



4. Solve the following logarithmic equation.

(4 pts) a. $\log(3x + 13) = 2$ (4 pts) b. $\log_2(3x - 2) = 4$

(8 pts)

5. Solve the following logarithmic equation.

$$\log_2(2x - 1) + \log_2(x + 3) = 2$$

(4 pts)

6. Solve the following exponential equation.

$$27^{x-2} = 9^{x+1}$$

(8 pts)

7. Solve the following exponential equation. **Give the exact answer and approximate your answer to two decimal places.**

$$5^{2x-1} = 4^{x+3}$$

(3 pts)

8. How long would it take an investment to double if at 5.3 % compounded continuously?